Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims

1. (Currently amended) A preparation in powder form for administration through **a mucosal membrane, consisting essentially of a** ~~mucosa, comprising a medicine of~~ high molecular weight **medicine** and **a cationic** aminoalkylmethacrylate copolymer **that comprises a dimethylaminoethyl methacrylate, methyl methacrylate, and butyl methacrylate**.

2. (Original) The preparation of claim 1, further comprising a viscous polymer.

3.-5. (Canceled)

6. (Original) The preparation of claim 2, wherein the viscous polymer is hydroxypropylmethyl cellulose.

7. (Original) The preparation of claim 1, wherein the medicine of high molecular weight is selected from the group consisting of bioactive peptides and proteins, antibodies, vaccines, and antigens.

8. (Previously presented) The preparation of claim 7, wherein the protein is a granulocyte colony-stimulating factor.

9. (Currently amended) The preparation of **claim 1, wherein the mucosa is nasal mucosa, ocular mucosa, oral mucosa, pulmonary mucosa, vaginal mucosa, gastric mucosa, small intestine mucosa, large intestine mucosa, or rectal mucosa** ~~any one of claims 1, 2, 6, 7, or 13-20, which is a preparation for pernasal administration~~.

10.-12. (Canceled)

13. (Currently amended) The preparation of claim 1**, wherein the ratio of cationic aminoalkylmethacrylate copolymer to high molecular weight drug is less than 2:1**~~, which comprises 0.1 to 90 w/w% of aminoalkylmethacrylate copolymer~~.

14. (Currently amended) The preparation of **claim 13, wherein the percentage weight-by-weight of cationic aminoalkylmethacrylate copolymer in the powdered preparation is 0.1 to 90 % (w/w)** ~~claim 1, which comprises 1 to 50 w/w% of aminoalkylmethacrylate~~.

15. (Canceled)

16. (Currently amended) The preparation of **claim 1** ~~claim 15~~, wherein the medicine of high molecular weight is selected from the group consisting of calcitonin, insulin, proinsulin, vasopressin, desmopressin, luteinizing hormone, luteinizing hormone-releasing hormone, somatostatin, prolactin, glucagon, gastrin, secretin, kallikrein, urokinase, neurotensin, enkephalin, kyotorphin, endorphin, endothelin, angiotensin, transferrin, atrial natriuretic polypeptide, epithelial growth factor, growth hormone, parathryoid hormone, interferons, interleukins, tumor necrosis factor, leukemia inhibitory factor, hematopoietic stem cell growth factor, erythropoietin, granulocyte colony-stimulating factor, granuloctye macrophage-stimulating factor, macrophage colony-stimulating factor, thrombopoietin, superoxide dismutase, tissue plasminogen activator, antithrombin, blood coagulation factors, anti-IgE antibodies, anti-IGA antibodies, anti-tumor antibodies, antibodies to tumor necrosis factor, anti-interleukin antibodies, HIV-neutralizing antibodies, anti-platelet antibodies, anti-hepatitis virus antibodies, hepatitis vaccines, influenza vaccines, pertussis vaccine, diptheria vaccine, tetanus toxoids vaccine.

17. (Previously presented) The preparation of claim 1, wherein said high molecular weight medicine is a protein.

18. (Previously presented) The preparation of claim 17, wherein said protein is conjugated to a hapten.

19. (Previously presented) The preparation of claim 18, further comprising an adjuvant.

20. (Previously presented) The preparation of claim 1, further comprising an adjuvant.

21. (Not entered)

22. (New) The preparation of claim 1, wherein the cationic aminoalkylmethacrylate copolymer is an Eudragit® E copolymer.

23. (New) The preparation of claim 22, wherein the Eudragit® E copolymer is Eudragit® E100.

24. (New) The preparation of claim 14, wherein the percentage weight-by-weight of cationic aminoalkylmethacrylate copolymer in the powdered preparation is 1 to 50% (w/w).

25. (New) The preparation of claim 1, wherein the mucosa is nasal mucosa.

26. (New) A method for enhancing the absorption of a high molecular weight medicine through a mucosal membrane of an individual, comprising (i) formulating a high molecular weight medicine with a cationic aminoalkylmethacrylate copolymer; (ii) preparing a powdered preparation of the formulation; and (iii) administering the powdered formulation via pernasal administration to the individual, wherein the cationic aminoalkylmethacrylate copolymer comprises a dimethylaminoethyl methacrylate, methyl methacrylate, and butyl methacrylate, and wherein the release of the high molecular weight medicine from the formulation is not sustained.

27. (New) The method of claim 26, wherein the cationic aminoalkylmethacrylate copolymer is an Eudragit® E copolymer.

28. (New) The method of claim 27, wherein the Eudragit® E copolymer is Eudragit® E100.

29. (New) The preparation of claim 1, wherein the medicine has a molecular weight of greater than 1000 MW.